

1 **CLAIMS**

2 1. A method comprising:  
3 receiving a broadcast data stream, wherein the broadcast data stream is  
4 encoded using any encoding format;  
5 demultiplexing the received broadcast data stream;  
6 storing the received broadcast data stream on a storage device; and  
7 time shifting the broadcast data stream.

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9 2. A method as recited in claim 1 wherein the broadcast data stream is a  
10 digital data stream.

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12 3. A method as recited in claim 1 wherein the broadcast data stream  
13 may utilize any data format.

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15 4. A method as recited in claim 1 wherein storing the received broadcast  
16 data stream on a storage device includes writing the broadcast data stream to an  
17 application programming interface.

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19 5. A method as recited in claim 1 further comprising retrieving the  
20 broadcast data stream from the storage device.

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22 6. A method as recited in claim 1 further comprising multiple systems  
23 retrieving the broadcast data stream simultaneously.

1           7.    A method as recited in claim 1 further comprising retrieving different  
2 portions of the broadcast data stream simultaneously.

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4           8.    A method as recited in claim 1 wherein the received broadcast stream  
5 is stored on the storage device using a plurality of temporary files.

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7           9.    A method as recited in claim 1 wherein the received broadcast stream  
8 is stored on the storage device using a single temporary file.

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10          10.   A method as recited in claim 1 wherein the received broadcast  
11 stream is stored on the storage device using at least one permanent file.

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13          11.   One or more computer-readable memories containing a computer  
14 program that is executable by a processor to perform the method recited in claim  
15 1.

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17          12.   A method comprising:  
18           receiving a digital data stream;  
19           separating components of the digital data stream;  
20           storing the components of the digital data stream on a storage device;  
21           receiving a command to play back the digital data stream;  
22           retrieving at least one of the stored components of the digital data stream  
23 from the storage device; and  
24           rendering the components of the digital data stream in a manner that  
25 corresponds to the received play back command.

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2       **13.**    A method as recited in claim 12 further comprising:  
3       receiving a command to pause play back of the digital data stream; and  
4       halting rendering of the components of the digital data stream in response  
5       to the pause command.

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7       **14.**    A method as recited in claim 12 wherein the play back command is  
8       a play command.

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10       **15.**   A method as recited in claim 12 wherein the play back command is  
11       a rewind command.

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13       **16.**   A method as recited in claim 12 wherein the play back command is  
14       a fast forward command.

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16       **17.**   A method as recited in claim 12 wherein the play back command is  
17       a seek command.

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19       **18.**   A method as recited in claim 12 wherein the play back command is  
20       a slow motion play command.

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22       **19.**   A method as recited in claim 12 wherein the play back command is  
23       a skip forward command.

1           **20.**    A method as recited in claim 12 wherein the play back command is  
2 a skip backward command.

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4           **21.**    A method as recited in claim 12 wherein storing the components of  
5 the digital data stream on a storage device includes writing the components of the  
6 digital data stream to an application programming interface.

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8           **22.**    A method as recited in claim 12 wherein the storage device is a hard  
9 disk drive.

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11           **23.**    A method as recited in claim 12 wherein the storage device is a hard  
12 disk drive and components of the digital data stream are stored in at least one  
13 temporary file or at least one permanent file on the hard disk drive.

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15           **24.**    A method as recited in claim 12 wherein the digital data stream can  
16 be encoded using any encoding format.

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18           **25.**    A method as recited in claim 12 wherein the digital data stream may  
19 utilize any data format.

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21           **26.**    A method as recited in claim 12 wherein multiple devices retrieve  
22 the stored components of the digital data stream simultaneously.

1           27. A method as recited in claim 12 wherein retrieving the stored  
2 components of the digital data stream includes:

3           a first device retrieving data associated with a first data stream stored on the  
4 storage device; and

5           a second device simultaneously retrieving data associated with a second  
6 data stream stored on the storage device.

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8           28. A method as recited in claim 12 wherein retrieving the stored  
9 components of the digital data stream includes:

10           a first device retrieving data from a first location in the digital data stream;  
11 and

12           a second device simultaneously retrieving data from a second location in  
13 the digital data stream.

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15           29. A method as recited in claim 12 wherein separating components of  
16 the digital data stream includes demultiplexing video data and audio data from the  
17 digital data stream.

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19           30. A method as recited in claim 12 wherein separating components of  
20 the digital data stream includes demultiplexing Internet Protocol data from the  
21 digital data stream.

1           **31.**   One or more computer-readable memories containing a computer  
2 program that is executable by a processor to perform the method recited in claim  
3 12.

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5           **32.**   A method comprising:  
6 receiving a broadcast data stream;  
7 separating components of the broadcast data stream;  
8 storing the components of the broadcast data stream on a storage device;  
9 retrieving the components of the broadcast data stream from the storage  
10 device;  
11 rendering the components of the broadcast data stream; and  
12 receiving a request to pause rendering of the broadcast data stream, in  
13 response to the pause request:  
14           halting rendering of the broadcast data stream;  
15           continuing to store the components of the broadcast data stream on  
16 the storage device.

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18           **33.**   A method as recited in claim 32 wherein the broadcast data stream is  
19 a television broadcast.

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21           **34.**   A method as recited in claim 32 wherein the broadcast data stream is  
22 a digital data stream.  
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1           **35.**    A method as recited in claim 32 further comprising:  
2           receiving a request to resume rendering of the broadcast data stream; and  
3           rendering the broadcast data stream based on the request to resume  
4           rendering of the broadcast data stream.

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6           **36.**    One or more computer-readable memories containing a computer  
7           program that is executable by a processor to perform the method recited in claim  
8           32.

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10          **37.**    One or more computer-readable media having stored thereon a  
11          computer program that, when executed by one or more processors, causes the one  
12          or more processors to:

13               separate the components of a broadcast data stream;  
14               store the components of the broadcast data stream on a hard disk drive;  
15               receive a request to play back the stored components of the broadcast data  
16               stream;  
17               retrieving the stored components of the broadcast data stream from the hard  
18               disk drive; and  
19               rendering the components of the broadcast stream.

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21          **38.**    One or more computer-readable media as recited in claim 37  
22          wherein rendering the components of the broadcast stream includes rendering the  
23          components of the broadcast stream in a manner that corresponds to the received  
24          play back request.  
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1           **39.**   One or more computer-readable media as recited in claim 37  
2 wherein rendering the components of the broadcast stream includes rendering  
3 multiple copies of the broadcast stream simultaneously.

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5           **40.**   One or more computer-readable media as recited in claim 37  
6 wherein the broadcast data stream is a television broadcast.

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8           **41.**   One or more computer-readable media as recited in claim 37  
9 wherein the separate components of a broadcast data stream are audio data and  
10 video data.

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12           **42.**   One or more computer-readable media as recited in claim 37  
13 wherein the separate components of a broadcast data stream include Internet  
14 Protocol data.

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16           **43.**   An apparatus comprising:  
17       a capture module configured to capture a data stream, wherein the data  
18 stream may be represented in a plurality of different data formats;  
19       a data storage module configured to store the captured data stream; and  
20       a rendering module configured to render the data stream from the data  
21 stored on the data storage module.

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23           **44.**   The apparatus of claim 43 wherein the data stream is encoded using  
24 any encoding format.



1       **45.**    The apparatus of claim 43 wherein the data storage module stores  
2 the captured data stream prior to decoding the captured data stream.

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4       **46.**    The apparatus of claim 43 wherein the capture module is further  
5 configured to separate the components of the data stream and the data storage  
6 module is further configured to store each of the separate components of the data  
7 stream.

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9       **47.**    The apparatus of claim 43 wherein the data storage module includes  
10 at least one hard disk drive.

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